We claim:

1. A method comprising:

determining at least one of a temperature and a firing resistance of a thermal fluid-ejection nozzle as the fluid-ejection nozzle is fired; and,

determining whether the fluid-ejection nozzle ejected fluid upon firing based on the at least one of the temperature and the firing resistance of the fluid-ejection nozzle.

2. The method of claim 1, wherein determining the at least one of the temperature and the firing resistance of the fluid-ejection nozzle comprises determining at least one of a temperature profile and a firing resistance profile over time as the fluid-ejection nozzle is fired.

3. The method of claim 2, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises:

comparing the at least one of the temperature profile and the firing resistance profile to a predetermined profile of a clogged fluid-ejection nozzle and a predetermined profile of an unclogged fluid-ejection nozzle;

where the at least one of the temperature profile and the firing resistance profile match the predetermined profile of the clogged fluid-ejection nozzle, concluding that the fluid-ejection nozzle failed to eject the fluid upon firing; and,

where the at least one of the temperature profile and the firing resistance profile match the predetermined profile of the unclogged fluid-ejection nozzle, concluding that the fluid-ejection nozzle ejected the fluid upon firing.

4. The method of claim 1, wherein determining the at least one of the temperature and the firing resistance of the fluid-ejection nozzle comprises determining a firing resistance profile over voltage as the fluid-ejection nozzle is fired.

5. The method of claim 4, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises:

comparing the firing resistance profile to a predetermined profile of a clogged fluid-ejection nozzle and a predetermined profile of an unclogged fluid-ejection nozzle;

where the firing resistance profile matches the predetermined profile of the clogged fluid-ejection nozzle, concluding that the fluid-ejection nozzle failed to eject the fluid upon firing; and,

where the firing resistance profile matches the predetermined profile of the unclogged fluid-ejection nozzle, concluding that the fluid-ejection nozzle ejected the fluid upon firing.

6. The method of claim 1, wherein determining at least one of the temperature and the firing resistance of the fluid-ejection nozzle comprises measuring the temperature of the fluid-ejection nozzle over time.

7. The method of claim 6, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises:

determining a transition temperature of the fluid-ejection nozzle of fluid nucleation based on the temperature of the fluid-ejection nozzle;

determining whether a time at which the transition temperature of the fluid-ejection nozzle occurs exceeds a threshold; and,

where the time at which the transition temperature occurs exceeds the threshold, concluding that the fluid-ejection nozzle failed to eject the fluid upon firing; and,

otherwise concluding that the fluid-ejection nozzle ejected the fluid upon firing.

8. The method of claim 1, wherein determining the at least one of the temperature and the firing resistance of the fluid-ejection nozzle comprises measuring the firing resistance of the fluid-ejection nozzle over time and indirectly measuring the temperature of the fluid-nozzle as proportional to the firing resistance of the fluid-ejection nozzle.

9. The method of claim 8, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises:

determining whether the firing resistance of the fluid-ejection nozzle at a predetermined time after firing exceeds a threshold;

where the firing resistance at the predetermined time after firing exceeds the threshold, concluding that the fluid-ejection nozzle failed to eject the fluid upon firing; and,

otherwise concluding that the fluid-ejection nozzle ejected the fluid upon firing.

10. The method of claim 8, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises determining refill time of a chamber of the fluid-ejection nozzle after two or more firing pulses and concluding that the fluid-ejection nozzle failed to eject the fluid upon firing where the refill time is greater than a threshold.

11. The method of claim 1, wherein determining the at least one of the temperature and the firing resistance of the fluid-ejection nozzle comprises indirectly measuring the temperature and the firing resistance of the fluid-ejection nozzle by determining a voltage of the fluid-ejection nozzle over time.

12. The method of claim 11, wherein determining whether the fluid-ejection nozzle ejected fluid upon firing comprises:

determining whether the voltage of the fluid-ejection nozzle at a predetermined time after firing exceeds a threshold;

where the voltage at the predetermined time after firing exceeds the threshold, concluding that the fluid-ejection nozzle failed to eject the fluid upon firing; and,

otherwise concluding that the fluid-ejection nozzle ejected the fluid upon firing.

13. The method of claim 1, where the fluid-ejection nozzle is an inkjet-printing nozzle and the fluid is ink.

14. A computer-readable medium having a computer program stored thereon to perform a method comprising:

determining a firing resistance profile of a thermal fluid-ejection nozzle over voltage as the fluid-ejection nozzle attempts to eject fluid;

comparing the firing resistance profile to a predetermined profile of a clogged fluid-ejection nozzle and a predetermined profile of an unclogged fluid-ejection nozzle;

where the firing resistance profile matches the predetermined profile of the clogged fluid-ejection nozzle, determining that the fluid-ejection nozzle failed to eject the fluid; and,

where the firing resistance profile matches the predetermined profile of the unclogged fluid-ejection nozzle, determining that the fluid-ejection nozzle ejected the fluid.

15. The medium of claim 14, where the fluid-ejection nozzle is an inkjet-printing nozzle and the fluid is ink.

16. A computer-readable medium having a computer program stored thereon to perform a method comprising:

measuring a temperature of a fluid-ejection nozzle over time as the fluid-ejection nozzle attempts to eject fluid;

determining a transition temperature of the fluid-ejection nozzle of fluid nucleation based on the temperature of the fluid-ejection nozzle as measured over time;

determining whether a time at which the transition temperature of the fluid-ejection nozzle occurs exceeds a threshold;

where the time at which the transition temperature occurs exceeds the threshold, concluding that the fluid-ejection nozzle failed to eject the fluid; and,

otherwise concluding that the fluid-ejection nozzle ejected the fluid.

17. The medium of claim 16, where the fluid-ejection nozzle is an inkjet-printing nozzle and the fluid is ink.

18. A computer-readable medium having a computer program stored thereon to perform a method comprising:

determining a voltage of a fluid-ejection nozzle over time as the fluid-ejection nozzle attempts to eject fluid;

determining whether the voltage of the fluid-ejection nozzle at a predetermined time after the fluid-ejection nozzle began to attempt to eject the fluid exceeds a threshold;

where the voltage at the predetermined time exceeds the threshold, concluding that the fluid-ejection nozzle failed to eject the fluid; and,

otherwise concluding that the fluid-ejection nozzle ejected the fluid.

19. The medium of claim 18, where the fluid-ejection nozzle is an inkjet-printing nozzle and the fluid is ink.

20. A thermal fluid-ejection device comprising:

at least one thermal fluid-ejection mechanism, each fluid-ejection mechanism having a plurality of thermal fluid-ejection nozzles; and,

a mechanism to determine whether any of the plurality of fluid-ejection nozzles of any of the at least one fluid-ejection mechanism has clogged without having to interrupt intended fluid ejection by the at least one fluid-ejection mechanism.

21. The device of claim 20, wherein the mechanism is to determine whether any of the plurality of fluid-ejection nozzles of any of the at least one fluid-ejection mechanism has clogged by measuring a temperature of each fluid-ejection nozzle over time as the fluid-ejection nozzle is fired.

22. The device of claim 20, wherein the mechanism is to determine whether any of the plurality of fluid-ejection nozzles of any of the at least one fluid-ejection mechanism has clogged by determining a voltage of each fluid-ejection nozzle over time as the fluid-ejection nozzle is fired.

23. The device of claim 20, wherein each fluid-ejection mechanism is an inkjet-printing mechanism having a plurality of inkjet-printing nozzles, such that the fluid-ejection device is an inkjet-printing device.

24. A thermal fluid-ejection device comprising:

at least one thermal fluid-ejection mechanism, each fluid-ejection mechanism having a plurality of thermal fluid-ejection nozzles; and,

means for determining whether any of the plurality of fluid-ejection nozzles of any of the at least one fluid-ejection mechanism has clogged without having to interrupt intended fluid ejection by the at least one fluid-ejection mechanism.

25. The device of claim 24, wherein each fluid-ejection mechanism is an inkjet-printing mechanism having a plurality of inkjet-printing nozzles, such that the fluid-ejection device is an inkjet-printing device.